

-SQA-SCOTTISH QUALIFICATIONS AUTHORITY

**Hanover House
24 Douglas Street
GLASGOW G2 7NG**

NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number- 0074474 -Session-1987-88
-Superclass- XS

-Title- MOBILE PLANT EXHAUST SYSTEMS (x 1/2)

-DESCRIPTION-

Type and Purpose A general module which enables the student to recognise faults in and carry out repairs and replacements to exhaust systems.

Preferred Entry Level No formal entry requirements.

Learning Outcomes The student should:

1. know the components of exhaust systems;
2. dismantle and reassemble exhaust systems;
3. carry out test procedures and rectify faults;
4. comply with regulations and procedures and use safe working practices specified for equipment and work areas.

Content/Context Corresponding to Learning Outcomes 1-4:

1. Basic features of exhaust systems: manifolds, connections, silencers and mountings;
2. Procedures for removal and replacement of exhaust systems using hand/power tools;
3. Correct procedures for testing systems for corrosion, leakage, blockage, rattles and misalignment. Methods of rectifying faults: replacement, resealing, realignment

4. Personal safety and regard for the safety of others, need for cleanliness and an orderly approach, care in use of equipment.

Suggested Learning and Teaching Approaches

This module should be presented in a practical environment in which basic tools and equipment are available.

Initial dismantling and assembling should be demonstrated to establish a foundation of good working practice. Thereafter, tasks should be presented in a format similar to that used in car maintenance manuals.

In the latter stages, suitable vehicles should be available for the repair/replacement of exhaust assemblies and the preparation of a report which includes the assembly and dismantling instructions, a list of tools and equipment and test procedures.

Safety, safe practices, care in use of equipment, should be an integral part of all module activities.

Assessment Procedures

Acceptable performance in the module will be satisfactory achievement of the performance criteria specified for each learning outcome.

Where cutting scores are stated these are intended to be for guidance. The precise cutting score for a test will depend on the difficulty of the test and will have to be decided by the Tutor aided by the Assessor.

The following abbreviations are used below:

LO Learning Outcome
IA Instrument of Assessment
PC Performance Criteria

LO1 IA Identification test - on 4 given exhaust systems the student is required to identify twelve items including

- (a) types of manifold arrangements;
- (b) flexible connections;
- (c) silencers;
- (d) mountings.

PC Cutting score 80%.

	LO2	IA	Practical exercise - the student is required to dismantle and to reassemble an exhaust system.
		PC	The performance criteria should be based on:
		(I)	following correct procedure for dismantling and reassembly;
		(ii)	avoiding unnecessary damage to components;
		(iii)	correct alignment of components;
		(iv)	correct fitting of components;
		(v)	correct tightening of bolts.
	LO3	IA	Practical exercise - the student is required to check a given exhaust system and to rectify faults which should include, the fitting of new mountings, the realigning of components and the sealing of gas leaks.
on		PC	The performance criteria should be based
		(I)	correct checking of system
		(ii)	identification of all faults
		(iii)	use of correct procedures in rectifying faults
		(iv)	adequate testing to ensure that all faults have been removed
work.	LO4	IA	Observation of student during practical
		PC	The performance criteria should be based on the student:
		(I)	wearing all necessary safety clothing and equipment
		(ii)	behaving in an appropriate manner
		(iii)	using tools and equipment correctly